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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,658	11/18/2003	Jin-Hec Jeong	61610100US	2830

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EXAMINER
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DINH, DUC Q

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/714,658

Applicant(s)

JEONG, JIN-HEE

Examiner

DUC Q. DINH

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/23/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. This Office Action is response to the Application filed on November 18, 2003. Claims 1-8 are currently pending and being examined in this Office Action.

#### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 8 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter because the invention as claimed does not produce *a useful, concrete, and tangible result*. A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57. In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." (see also MPEP § 2106).

Since claim 8 recites a method of an abstract idea and do not provide a practical application of the abstract ideas, thus, do not provide a concrete and tangible result, the rejection under U.S.C. 101 is proper.

#### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 recites the limitation "the predetermined voltage maintained period" in line 16.

There is insufficient antecedent basis for this limitation in the claim.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "wherein a ramp voltage to the scan electrode while maintaining the sustain electrode at the first bias voltage" in lines 12-13, it appears to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayama et al. (U.S Patent No. 6,249,087), hereinafter Takayama.

In reference to claim 1, Takayama discloses in Fig. 4 a method for driving a plasma display panel including a scan electrode (Y) and a sustain electrode (X) provided in parallel on a first substrate (11), and an address electrode provided on a second substrate (21), the address electrode (A) crossing the scan electrode and the sustain electrode, the method comprising:

during a reset period (TR), applying a rising ramp voltage to the sustain electrode up to a first voltage level (V2x), and erasing wall charges, after a previous sustain period is complete;

maintaining the address electrode and the sustain electrode at a second voltage ( $V_{2a}$  and  $V_s$ ) when the erasing is finished, and applying a ramp voltage ( $V_{2y}$ ) to the scan electrode, the ramp voltage gradually rising from a voltage below the discharge firing voltage ( $V_s$ ) with respect to the sustain electrode to a third voltage ( $V_{2y}$ ) over a discharge firing voltage;

applying when the step of maintaining is finished, wherein a ramp voltage to the scan electrode while maintaining the sustain electrode at the first bias voltage ( $V_{x2}$ ); the ramp voltage gradually falls to a predetermined voltage from the fourth voltage ( $V_{y3}$ ) and maintaining the sustain electrode at a second bias voltage ( $V_x$ ) below the first bias voltage of the sustain electrode during the predetermined voltage maintain period of the scan electrode formed after finishing the applying step.

In reference to claim 2, Takayama discloses the second voltage is 0V (Table 3)

In reference to claim 3, Takayama discloses the level of the second bias voltage of the sustain electrode is substantially identical to the fourth voltage level (see Fig. 4).

In reference to claim 4, Takayama discloses the sustain electrode is maintained below 0 volts ( $V_{1x}$ ) during the step of maintaining the address electrode.

In reference to claim 5, Takayama discloses the scan electrode ramp-falls from the fourth voltage to the predetermined voltage and maintained ( $V_{y3}$ ).

In reference to claim 6, Takayama discloses plasma display panel driver comprising:

a plasma panel for providing a plurality of address electrodes, and first electrode and a second electrode crossing the address electrodes, the first electrodes and the second electrodes being in pairs and parallel to each other, and a crossing area of the address electrode and the first

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electrodes and the second electrodes forming a discharge cell (see Fig. 1 and rejection as applied to claim 1);

a controller for externally receiving video signals, and generating an address driving signal, first electrode driving signals and second electrode driving signals (see Fig. 1);

an address driver (89) for receiving the address driving signal from the controller, and applying a display data signal for selecting a discharge cell to be displayed to the address electrode;

a first driver (85) for receiving the driving signals from the controller, and applying a voltage to a first electrode (X) of a cell selected for discharge so as to generate discharge to the first electrode; and

a second driver (86) for receiving the driving signals from the controller, and applying a voltage to the second electrode (Y) so that the cell selected for discharge may maintain discharging for a predetermined time,

wherein the first driver (85) applies a voltage ( $V_{x2}$ ) that is ramp-risen to a first voltage level to the first electrode (X), maintains the voltage at a second voltage level below the first voltage level, ramp-falls the voltage to a third voltage level, and maintains the ramp-fallen voltage, and (see Fig. 4 at display electrode X)

wherein the second driver applies a first bias voltage to the second electrode during the ramp falling period of the first electrode, and applies a second bias voltage below the first bias voltage to the second electrode while the first electrode is maintained at a third voltage level. (see Fig. 4 at display electrode Y and col. 10 line 45 through col. 11, line 9).

In reference to claim 7, Takayama discloses the voltage level of the second bias voltage is substantially identical to the second voltage level of the first electrode (see display electrode X and display electrode Y in Fig. 4).

In reference to claim 8, Takayama discloses a method for driving a plasma display including a scan electrode and a sustain electrode provided in parallel on a first substrate, and an address electrode provided on a second substrate, the address electrode crossing the scan electrode and the sustain electrode, the method comprising (see rejection as applied to claim 1):

after applying a falling ramp voltage ( $V_{2y}$ - $V_{3y}$ ) to the scan electrode such that the scan electrode reaches a predetermined voltage, reducing a voltage ( $V_{3x}$ - $V_x$ ) of the sustain electrode such that a voltage difference between the scan electrode and the sustain electrode is reduced.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH  
Examiner  
Art Unit 2629



DQD  
March 13, 2007